AMENDMENTS TO THE SPECIFICATION:

P.1, line 5 (first paragraph after the title and subtitle of Cross References), replace the paragraph:

"The subject matter of this patent application is related to that of co-pending U.S. Provisional Patent Application No. 60/424,760 filed on November 12, 2002 the full disclosure of which is incorporated herein by reference. The present patent application is also related to pending Patent Application No. ..... filed by the same applicant on ....."

with the following:

--The subject matter of this patent application is related to that of co-pending U.S. Provisional Patent Application No. 60/424,760 filed on November 12, 2002 the full disclosure of which is incorporated herein by reference. The present patent application is also related to pending Patent Application No. 10/615733 filed by the same applicant on July 7, 2003.—

Page 2, line 16 to page 3, line 2, replace the paragraph:

"Most of the laser energy is absorbed by the matrix, which prevents unwanted fragmentation of the biomolecule. Matrices are small organic compounds that are co-crystallized with the analyte. It seems that the presence of the matrix, spares the analyte from degradation, resulting in the detection of intact molecules as large as 1 million Da (Dalton or amu are atomic mass units used in microbiology). For example, in time-of-flight mass spectrometers, the ionized biomolecules are accelerated in an electric field and enter the flight tube. During the flight in this tube, different molecules are separated according to their mass to charge ratio and reach the detector at different times. In this way each molecule yields a distinct signal. The method is used for detection and characterization of biomolecules, such as proteins, peptides, oligosaccharides and oligonucleotides, with molecular masses, e.g., between 200 and 350,000 Da."

with the following:

--Most of the laser energy is absorbed by the matrix, which prevents unwanted fragmentation of the biomolecule. Matrices are small organic compounds that are co-crystallized with the analyte. It seems that the presence of the matrix spares the analyte from degradation, resulting in the detection of intact molecules as large as 1 million Da (Dalton or amu are atomic mass units used in microbiology). For example, in time-of-flight mass spectrometers, the ionized biomolecules are accelerated in an electric field and enter the flight tube. During the flight in this tube, different molecules are separated according to their mass-to-charge ratio and reach the detector at different times. In this way each molecule yields a distinct signal. The method is used for detection and characterization of biomolecules, such as proteins, peptides, oligosaccharides, and oligonucleotides, with molecular masses, e.g., between 200 and 350,000 Da.—

Page 3, line 7-10, replace the paragraph:

"The most important step in MALDI, is sample preparation. During this step, the matrix and analyte are mixed, and the mixture is dried on a probe or as it is more common now, on a sample plate. Upon preparation, the sample is loaded into the mass spectrometer. "

with the following:

--The most important step in MALDI is sample preparation. During this step, the matrix and analyte are mixed, and the mixture is dried on a probe or, as it is more common now, on a sample plate. Upon preparation, the sample is loaded into the mass spectrometer. –

Page 3, lines 3-5 from the bottom, replace the paragraph:

"Once the sample molecules are vaporized and ionized they are transferred into a mass spectrometer where they are separated from the matrix ions, and individually detected."

with the following:

--Once the sample molecules are vaporized and ionized, they are transferred into a mass spectrometer where they are separated from the matrix ions and individually detected. –

Page 3, lines 1-2 from the bottom to Page 4, line 6, replace the paragraph:

"A sample support used in the aforementioned system may comprise a thin, substantially square plate of stainless steel or other suitable material, e.g., approximately 1.5 mm thick and 50 mm wide. An example of a sample support geometry is the one described, e.g., in U.S. Reissued Patent RE 37,485 filed by Marvin L. Vestal and published on December 25, 2001. The system is equipped with a support transport mechanism working in vacuum and intended for automatically inputting and outputting each of the sample supports into and from the sample receiving chamber of the mass spectrometer."
with the following:
--A sample support used in the aforementioned system may comprise a thin, substantially square plate of stainless steel or another suitable material, e.g., approximately 1.5 mm thick and 50 mm wide sample. An example of a sample support geometry is the one described, e.g., in U.S. Reissued Patent RE 37,485 filed by Marvin L. Vestal and published on December 25, 2001. The system is equipped with a support transport mechanism working in vacuum and intended for automatically inputting and outputting each of the sample supports into and from the sample receiving chamber of the mass spectrometer.—

Page 4, line 1 to 5 from the bottom to Page 5, line 17:
replace two paragraphs:
"Another example of a similar sample plate support or holder intended for atmospheric-pressure MALDI can be found in co-pending U.S. Patent Application No. ..... of the same applicant. The sample plate carriers of this application are designed for automatic loading/unloading into and from the sample storage device, such as a sample

plate carrier cassette which is used in conjunction with a computer-controlled sample holder handling mechanism for taking a sample plate carrier from the aforementioned cassette, extracting the sample plate from the carrier, inserting the sample plates to the target flange for interface with a mass spectrometer orifice, securing it in a working position for analysis, unloading back to the sample plate carrier after completion of the analysis, and inserting the sample plate to a desired cell of the sample storage device.

In the specific embodiments of aforementioned U.S. Patent Application No. ....., the system is provided with two holder transportation units. The sample holder or carrier of the aforementioned type has specifically shaped slots for engagement with grippers of a mechanism intended for extraction of the sample plate carriers from the cassette and for loading them into the cassette and for disconnection of the sample plates from the respective carriers. Information about individual positions of the holders is stored in the memory of a common central processing unit, which also controls operation of all actuating mechanisms of the aforementioned modules. In other words, the aforementioned carriers only hold the sample plates with multiple sample cells and do not carry any address information or data about the samples or sample plate carriers themselves or about the analysis history, etc."

with the following paragraphs:

--Another example of a similar sample plate support or holder intended for atmospheric-pressure MALDI can be found in co-pending U.S. Patent Application No. 10/615,733 of the same applicant. The sample plate carriers of this application are designed for automatic loading/unloading into and from the sample storage device, such as a sample plate carrier cassette which is used in conjunction with a computer-controlled sample holder handling mechanism for taking a sample plate carrier from the aforementioned cassette, extracting the sample plate from the carrier, inserting the sample plates to the target flange for interface with a mass spectrometer orifice, securing it in a working position for analysis, unloading back to the sample plate carrier after completion of the analysis, and inserting the sample plate to a desired cell of the sample storage device.

In the specific embodiments of aforementioned U.S. Patent Application No. 10/615,733, the system is provided with two holder transportation units. The sample holder or carrier of the aforementioned type has specifically shaped slots for engagement with grippers of a mechanism intended for extraction of the sample plate carriers from the cassette and for loading them into the cassette and for disconnection of the sample plates from the respective carriers. Information about individual positions of the holders is stored in the memory of a common central processing unit, which also controls operation of all actuating mechanisms of the aforementioned modules. In other words, the aforementioned carriers only hold the sample plates with multiple sample cells and do not carry any address information or data about the samples or sample plate carriers themselves or about the analysis history, etc.—

Page 7, line 1 to 6 from the bottom to Page 8, line 9, replace the paragraph:

"Although the aforementioned system of manually-handled carriers with a built-in memory is efficient and convenient due to wireless access to the memory of the carrier for reading/wring the information, the carries of the aforementioned type use RF communication and should have relatively large dimensions. They are intended for manual transportation, handling, loading, and unloading into a blood-analysis control system installed in a laboratory. In other words, the phlebotomic sample plate carriers of Oy Ideos, Ltd. is inapplicable for genomic studies, where thousands of samples have to be treated during a short period of time on a series of sequentially arranged units of biomedical analytical equipment. The sample plate carrier with transmission and receiving of RF signals should have large overall dimensions. Furthermore, radio frequency signals generated by the cards may interfere with sensitive instruments of the analytical laboratory, to say nothing of the case if such carries were installed side by side into the cells of the sample plate carrier cassette where it would be impossible to identify the required carrier without activation of all of them at the same time."

with the following:

--Although the aforementioned system of manually-handled carriers with a built-in memory is efficient and convenient due to wireless access to the memory of the carrier for reading/wring the information, the carries of the aforementioned type use RF communication and should have relatively large dimensions. They are intended for manual transportation, handling, loading, and unloading into a blood-analysis control system installed in a laboratory. In other words, the phlebotomic sample plate carriers of Oy Ideos, Ltd. are inapplicable for genomic studies, where thousands of samples have to be treated during a short period of time on a series of sequentially arranged units of biomedical analytical equipment. The sample plate carrier with transmission and receiving of RF signals should have large overall dimensions. Furthermore, radio frequency signals generated by the cards may interfere with sensitive instruments of the analytical laboratory, to say nothing of the case if such carries were installed side by side into the cells of the sample plate carrier cassette where it would be impossible to identify the required carrier without activation of all of them at the same time. –

Page 8, line 15 to Page 9, line 5 from the bottom (the entire section "OBJECTS OF THE INVENTION"), replace the paragraph:

"It is an object of the invention to provide a system that consists of sample plate carriers with built-in memory elements and an input/output station for inputting/outputting data into/from the aforementioned memory elements. It is an object of the invention to provide sample plate carriers with memory elements storing on-rout information about the samples and history of processing suitable for high throughput analysis of high-volume samples. It is another object is to provide the aforementioned sample plate carriers suitable for genomic MALDI mass-spectrometric study. It is another object to provide the sample plate carrier of the aforementioned type provided with an electronic nonvolatile re-recordable memory device for recording information on the methods that are used for sample deposition,

sample modification, sample alternation, or sample analysis. It is another object to provide the sample plate carrier of the aforementioned type provided with a memory device for writing the information on the current steps and results of the analysis. A further object is to provide the aforementioned sample plate carriers that could be compactly packed into cells of a sample storage cassette without mutual interference. Still another object is to provide a sample plate carrier storage cassette with means for individual access to each sample plate carrier through the inlet port of the cassette. An additional object is to provide the aforementioned sample plate carrier, which is universal in that it can interact with various gripping mechanisms for serving units of analytical equipment in the line of analysis. A further object is to provide the aforementioned sample plate carrier that allows replacement of the sample plates of different geometry with rewriting data in accordance with characteristics of new samples. It is object of the invention to provide sample plate carrier for use without direct contact of mechanical actuators and grippers with the sample plate. Another object is to provide a sample plate carrier that is free of contamination during handling and does not require the use of removable stickers with information. An additional object of the invention to provide an efficient way for establishing unique correlations between information data, sample plate with a specific samples, and methods of analysis. It is an object to provide the aforementioned sample plate carrier with a reliable lock to prevent a sample plate from accidental disengagement from the carrier. It is another object to provide the aforementioned sample plate carrier, which has a non-symmetrical geometry to insure the unique orientation of the holder in the cassette and other carrier holding devices. ''

with the following:

-- It is an object of the invention to provide a system that consists of sample plate carriers with built-in memory elements and an input/output station for inputting/outputting data into/from the aforementioned memory elements. It is an object of the invention to provide sample plate carriers with memory elements storing

on-rout information about the samples and history of processing suitable for high throughput analysis of high-volume samples. It is another object to provide the aforementioned sample plate carriers suitable for genomic MALDI mass-spectrometric study. It is another object to provide the sample plate carrier of the aforementioned type provided with an electronic nonvolatile re-recordable memory device for recording information on the media that are used for sample deposition, sample modification, sample alternation, or sample analysis. It is another object to provide the sample plate carrier of the aforementioned type provided with a memory device for writing the information on the current steps and results of the analysis. A further object is to provide the aforementioned sample plate carriers that could be compactly packed into cells of a sample storage cassette without mutual interference. Still another object is to provide a sample plate carrier storage cassette with means for individual access to each sample plate carrier through the inlet port of the cassette. An additional object is to provide the aforementioned sample plate carrier, which is universal in that it can interact with various gripping mechanisms for serving units of analytical equipment in the line of analysis. A further object is to provide the aforementioned sample plate carrier that allows replacement of the sample plates of different geometry with rewriting data in accordance with characteristics of new samples. It is object of the invention to provide a sample plate carrier for use without direct contact of mechanical actuators and grippers with the sample plate. Another object is to provide a sample plate carrier that is free of contamination during handling and does not require the use of removable stickers with information. An additional object of the invention is to provide an efficient way for establishing unique correlations between information data, sample plate with a specific samples, and methods of analysis. It is an object to provide the aforementioned sample plate carrier with a reliable lock to prevent a sample plate from accidental disengagement from the carrier. It is another object to provide the aforementioned sample plate carrier, which has a non-symmetrical geometry to insure the unique orientation of the holder in the cassette and other carrier holding devices. --

Page 8, lines 1-3 from the bottom to Page 9, line 4 from the bottom (the whole section "SUMMARY OF THE INVENTION", replace the paragraph:

"The invention relates to a system that consists of a plurality of sample plate carriers with resettable built-in memory devices and an information input/output station for the aforementioned memory devices. In the preferred embodiment the aforementioned station comprises a storage cassette for the carriers. The cassette is designed for storing special sample plate carriers for holding sample plates with a plurality of samples intended for analysis, e.g., for AP-MALDI mass spectrometry. Each sample plate carrier is provided with a memory element, such as a miniature nonvolatile information storage device having input/output contacts for interaction with appropriate contacts or terminals provided in each cell of the cassette. The cassette has an input/output port for selectively entering or extracting information into or from the memory unit. This information may relate to the specific sample plates or sample plate carriers that holds the memory element and may relate to positions of the carriers and of the samples on the sample plates and events that occurred with the samples on the specific sample plates. The contacts of each sample plate carrier may also interact with input/output stations of other instruments or storage devices included into the line of analysis. Each sample plate carrier is provided with a locking mechanism for removably locking the sample plates in the carrier. The carriers have asymmetric shape for correct orientation of the carriers in the cells of the cassette and are provided with a number of features that facilitates interaction with grippers and actuators of various types for automatic loading/unloading of the sample plate carriers into/from the cassette and for transportation between the working stations."

with the following:

--The invention relates to a system that consists of a plurality of sample plate carriers with resettable built-in memory devices and an information input/output station for the aforementioned memory devices. In the preferred embodiment the aforementioned

station comprises a storage cassette for the carriers. The cassette is designed for storing special sample plate carriers for holding sample plates with a plurality of samples intended for analysis, e.g., for AP-MALDI mass spectrometry. Each sample plate carrier is provided with a memory element, such as a miniature nonvolatile information storage device having input/output contacts for interaction with appropriate contacts or terminals provided in each cell of the cassette. The cassette has an input/output port for selectively entering or extracting information into or from the memory unit. This information may relate to the specific sample plates or sample plate carriers that holds the memory element and may relate to positions of the carriers and of the samples on the sample plates and events that occurred with the samples on the specific sample plates. The contacts of each sample plate carrier may also interact with input/output stations of other instruments or storage devices included into the line of analysis. Each sample plate carrier is provided with a locking mechanism for removably locking the sample plates in the carrier. The carriers have asymmetric shape for correct orientation of the carriers in the cells of the cassette and are provided with a number of features that facilitate interaction with grippers and actuators of various types for automatic loading/unloading of the sample plate carriers into/from the cassette and for transportation between the working stations.--

Page 13, lines 1-5 from the bottom to line 3 of Page 14, replace the paragraph:
"As shown in this drawing, a sample plate holder or carrier 20 for holding, protecting, and carrying sample plates has a carrier body 22 that has a central portion and a peripheral portion. The central portion has a sample plate recess 24 conformal to a sample plate (not shown in Fig. 1A), which is to be inserted and secured in this recess. In its peripheral portion, the carrier body 22 supports a mechanical locking mechanism 26 for reliable lock a sample in the carrier body 22 and a resettable memory device 28, e.g., an electronic device, such as a integrated circuit (IC) chip for storing information removably inserted into a recess 30 formed in the carrier body 22."

with the following:

--As shown in this drawing, a sample plate holder or carrier 20 for holding, protecting, and carrying sample plates has a carrier body 22 that has a central portion and a peripheral portion. The central portion has a sample plate recess 24 conformal to a sample plate (not shown in Fig. 1A), which is to be inserted and secured in this recess. In its peripheral portion, the carrier body 22 supports a mechanical locking mechanism 26 for reliably locking a sample in the carrier body 22 and a resettable memory device 28, e.g., an electronic device, such as a integrated circuit (IC) chip for storing information removably inserted into a recess 30 formed in the carrier body 22.--

Page 14, lines 4-7, replace the paragraph:

"Furthermore, in its peripheral portion, the carrier body 22 has through holes 32, 34, and 36 for engaging with a T-shaped mechanical actuators of the mass spectrometer loading system of the type disclosed in our co-pending U.S. Patent Application No. 10/615,733.'

With the following:

-[-Furthermore, in its peripheral portion, the carrier body 22 has through holes 32, 34, and 36 for engaging with a T-shaped mechanical actuator of the mass spectrometer loading system of the type disclosed in our co-pending U.S. Patent Application No. 10/615,733. –

Page 14, lines 1-7 from the bottom, replace:

"The recess walls have small projections 38 and 40 (Fig. 1B) and a recess 42 with a flat bottom machined into the carrier body 22 to insure that the front side of the sample plate, not shown in Fig. 1A and defined as the side with samples, is spaced apart from the carrier body 22 to protect the samples from mechanical damage and contamination. The aforementioned recess 42 is needed to accommodate a conforming projection with

positioning hole on a standard sample holder described in the aforementioned patent application. "

with the following:

--

The recess walls have small projections 38 and 40 (Fig. 1B) and a recess 42 with a flat bottom machined into the carrier body 22 to insure that the front side of the sample plate, not shown in Fig. 1A and defined as the side with samples, is spaced apart from the carrier body 22 to protect the samples from mechanical damage and contamination. The aforementioned recess 42 is needed to accommodate a conforming projection with a positioning hole on a standard sample holder described in the aforementioned patent application. --

Page 15, line 11 to the last line of the page, replace the paragraph:

" The information from this device can be scanned out by establishing only two data input/output electrical connections with two opposite halves of the capsule called the ground and the data. Also only two data input/output electrical connections are needed to write information into DS 1996L device. For the operation with a high throughput system the nonvolatile information storage device 28 can be preprogrammed by the user to record in its memory the sample info and the sample history as well as to have either direct instruction set or methods for the mass spectrometer or to have a pointer to a method file located either on a mass spectrometer computer or on other computers accessible by the mass spectrometer computer network. This information may contain an index reference to a particular sample plate currently held by the carrier. Such index reference may comprise a barcode or a number engraved directly on the sample plate for tracing the path of the sample plates through system. It is possible that a part of the information on the device 28 can be prepared and recorded on an automated apparatus such as a sample deposition device, which is beyond the scope of the present invention, without direct human interference. "

with the following:

-- The information from this device can be scanned out by establishing only two data input/output electrical connections with two opposite halves of the capsule called the ground and the data. Also only two data input/output electrical connections are needed to write information into DS 1996L device. For the operation with a high throughput system the nonvolatile information storage device 28 can be preprogrammed by the user to record in its memory the sample info and the sample history as well as to have either direct instruction set or methods for the mass spectrometer or to have a pointer to a method file located either on a mass spectrometer computer or on other computers accessible by the mass spectrometer computer network. This information may contain an index reference to a particular sample plate currently held by the carrier. Such index reference may comprise a barcode or a number engraved directly on the sample plate for tracing the path of the sample plates through the system. It is possible that a part of the information on the device 28 can be prepared and recorded on an automated apparatus such as a sample deposition device, which is beyond the scope of the present invention, without direct human interference. --

Page 16, lines 6-12, replace the paragraph:

" It may also be desirable to have a permanent factory-unique bar code on the sample holder 20 that can be positioned, for example, on the front side of the carrier body 22 in such are as the areas 50 shown in Figs. 1A and 1B. It can be beneficial to have semi-permanent bar code sticker that identifies information on a specific research group or a sample group or a specific project. All this information can also be recorded within the nonvolatile information storage device 28."

with the following:

-- It may also be desirable to have a permanent factory-unique bar code on the sample holder 20 that can be positioned, for example, on the front side of the carrier body 22 in such areas as the areas 50 shown in Figs. 1A and 1B. It can be beneficial to have semi-permanent bar code sticker that identifies information on a specific research group or a sample group or a specific project. All this information can also be recorded within the nonvolatile information storage device 28.--

Page 16, lines 1-3 from the bottom to line 5 on Page 17, replace the paragraph:

"Fig. 4 shows exploded view of the locking mechanism 26. It can be seen that this mechanism consists of a spring 54 and a locking element 56. The locking element has a form of a two-arm lever with arms 56a and 56b. The arm 56a has, on its end facing the carrier body 22, a projection 56c for engagement with a recess 58 in the carrier body 22. Normally, the spring 54 presses the arm 56b against the sample plate 52 inserted into the recess 24 of the carrier body 22. By pushing on the arm 56a against the force of the spring 54, the arm 56b unlocks the sample plate so that it can be replaced."

with the following:

-- Fig. 4 shows an exploded view of the locking mechanism 26. It can be seen that this mechanism consists of a spring 54 and a locking element 56. The locking element has a form of a two-arm lever with arms 56a and 56b. The arm 56a has, on its end, facing the carrier body 22, a projection 56c for engagement with a recess 58 in the carrier body 22. Normally, the spring 54 presses the arm 56b against the sample plate 52 inserted into the recess 24 of the carrier body 22. By pushing on the arm 56a against the force of the spring 54, the arm 56b unlocks the sample plate so that it can be replaced. --

Page 17, lines 13-23, replace the paragraph:

"Fig. 5 is a three-dimensional view of a sample-plate receiver/inserter 53 (hereinafter referred to as the receiver 53) suitable for automatic removal of the sample plates 52 from the sample plate carrier body 22 or for automatic insertion into the sample plate carrier body 22. The receiver 53 has locating pins 56a, 56b,... 56n arranged on the receiver's periphery. These pins are intended for aligning the position of the receiver relative to the sample plate 52 due to engagement with the positioning holes 58a, 58b, ... 58n formed in the carrier body 22 over the periphery of the recess 24 (Fig. 1A). What is means in this context under the term periphery or peripheral portion is an area outside the recess. The center of the receiver 53 has a magnet 60 used to attach the sample plate 52 to the receiver 53 if the mechanical lock 26 is open."

with the following:

--Fig. 5 is a three-dimensional view of a sample-plate receiver/inserter 53 (hereinafter referred to as the receiver 53) suitable for automatic removal of the sample plates 52 from the sample plate carrier body 22 or for automatic insertion into the sample plate carrier body 22. The receiver 53 has locating pins 56a, 56b,... 56n arranged on the receiver's periphery. These pins are intended for aligning the position of the receiver relative to the sample plate 52 due to engagement with the positioning holes 58a, 58b, ... 58n formed in the carrier body 22 over the periphery of the recess 24 (Fig. 1A). What is meant in this context under the term periphery or peripheral portion is an area outside the recess. The center of the receiver 53 has a magnet 60 used to attach the sample plate 52 to the receiver 53 if the mechanical lock 26 is open.—

Page 20, lines 1-10, replace the paragraph:

"As has been mentioned above, nonvolatile information storage device 28 may comprise a commercially produced electronic unit, e.g., the one manufactured by Dallas Semiconductor. The cassette 80 is provided with electrical contacts for individual and selective electrical connection to the input/output terminals of the nonvolatile information storage device 28 of each sample plate carrier loaded into the cassette 80.

This features allows for inputting/outputting data into/from the storage devices 28 of sample holders selected by the central processing unit of the mechanism for handling the carriers with the samples, while these carriers are located in the cells of the cassette 80. In other words, the cassette 80 may be used as a unit for loading/unloading information.'

with the following:

--As has been mentioned above, nonvolatile information storage device 28 may comprise a commercially produced electronic unit, e.g., the one manufactured by Dallas Semiconductor. The cassette 80 is provided with electrical contacts for individual and selective electrical connection to the input/output terminals of the nonvolatile information storage device 28 of each sample plate carrier loaded into the cassette 80. This features allow for inputting/outputting data into/from the storage devices 28 of sample holders selected by the central processing unit of the mechanism for handling the carriers with the samples, while these carriers are located in the cells of the cassette 80. In other words, the cassette 80 may be used as a unit for loading/unloading information. --

Page 21, lines 9-22, replace the paragraph:

"Fig. 12 is a view on the sample plate carrier 20b in accordance with another embodiment of the invention. In this embodiment, the first pair of input/output contacts 28a and 28b of the sample plate carrier 20b for inputting/outputting data have input/output terminals 20c and 20d, respectively, in the T-shaped slots 32a and 36a of the sample plate carrier 20b. On the other hand, the second pair of the input/output contacts 33a and 35a is built into respective T-shaped projections 37a and 39a. The contacts 33a and 35a are connected by conductors 41a and 43a, e.g., to a central processing unit (not shown) or to a similar data acquisition and processing device. In the system of this embodiment, inputting/outputting of the information into and from the memory element 28c is carried out during handling of the sample plate carrier 20b with

the respective sample plate 52a via electrical connection between the contacts of the sample plate carrier with the contacts of the T-shaped projections of the gripper. "

with the following:

--Fig. 12 is a view on the sample plate carrier 20b in accordance with another embodiment of the invention. In this embodiment, the first pair of input/output contacts 28a and 28b of the sample plate carrier 20b for inputting/outputting data has input/output terminals 20c and 20d, respectively, in the T-shaped slots 32a and 36a of the sample plate carrier 20b. On the other hand, the second pair of the input/output contacts 33a and 35a is built into respective T-shaped projections 37a and 39a. The contacts 33a and 35a are connected by conductors 41a and 43a, e.g., to a central processing unit (not shown) or to a similar data acquisition and processing device. In the system of this embodiment, inputting/outputting of the information into and from the memory element 28c is carried out during handling of the sample plate carrier 20b with the respective sample plate 52a via electrical connection between the contacts of the sample plate carrier with the contacts of the T-shaped projections of the gripper. --

Page 21, lines 1-4 from the bottom to Page 22, lines 1-5, replace the paragraph:

"Fig. 13 is a view of sample plate carrier 20e in accordance with still another embodiment for inputting/outputting data through contacts of the sample plate carrier memory device 28e with contacts of an intermediate station 45. The intermediate station 45 has a second pair of contacts 28h and 28i for electrical interaction with respective contacts 28g and 28f of the memory element 28e. In this embodiment, inputting/outputting of data occurs when the sample plate carrier 20e supported by the T-shaped grippers 37b and 39b is passed in the direction of the arrow A through the intermediate station 45 for interaction of the first pair of contacts with the second pair of contacts."

with the following:

--Fig. 13 is a view of sample plate carrier 20e in accordance with still another embodiment for inputting/outputting data through contacts of the sample plate carrier memory device 28e with contacts of an intermediate station 45. The intermediate station 45 has a second pair of contacts 28h and 28i for electrical interaction with respective contacts 28g and 28f of the memory element 28e. In this embodiment, inputting/outputting of data occurs when the sample plate carrier 20e supported by the T-shaped grippers 37b and 39b is passed in the direction of the arrow A through the intermediate station 45 for interaction of the first pair of contacts with the second pair of contacts. –

Page 22, lines 5-21, replace the paragraph:

"Fig. 14 is a three-dimensional view of a multiposition sample plate carrier 110 of the invention. For the simplicity of the drawing and explanation, the sample plate carrier is shown only with positions for two samples plate 112a and 112b. The sample plate carrier 110 has a memory device 114 common for both sample plate locations 112a and 112b. In this embodiment, the memory device 114 is shown as an electronic smart chip device The memory device 114 may be a commercially available "smart chip" device that is commonly used in banking cards, telephone cards, and the like. Smart chips are secure, compact and intelligent data carriers. The sample plate carrier 110 possesses versatility in that it can be used with two sample plates having identical samples, two sample plates with different samples, or with a single sample plate. One location, e.g., 112a, can be used for initial loading of the sample plate while the second location 112b, can be used for storing the plate with samples that have been previously processed or analyzed. Alternatively, one of the plates may carry control or reference samples and the other may carry the sample to be analyzed."

with the following:

--Fig. 14 is a three-dimensional view of a multiposition sample plate carrier 110 of the invention. For the simplicity of the drawing and explanation, the sample plate carrier is shown only with positions for two samples plate 112a and 112b. The sample plate carrier 110 has a memory device 114 common for both sample plate locations 112a and 112b. In this embodiment, the memory device 114 is shown as an electronic smart chip device. The memory device 114 may be a commercially available "smart chip" device that is commonly used in banking cards, telephone cards, and the like. Smart chips are secure, compact and intelligent data carriers. The sample plate carrier 110 possesses versatility in that it can be used with two sample plates having identical samples, two sample plates with different samples, or with a single sample plate. One location, e.g., 112a, can be used for initial loading of the sample plate while the second location 112b, can be used for storing the plate with samples that have been previously processed or analyzed. Alternatively, one of the plates may carry control or reference samples and the other may carry the sample to be analyzed.--